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Title:	**TW0436383B: THE END-POINT DETECTION METHOD OF CMP POL USING THE PRINCIPLE OF OPTICAL CONFOCAL FEEDBACK**
Country:	**TW** Taiwan
Kind:	**B** Patent !
Inventor:	**LU, CHUN-HUNG**; , Taiwan **LI, MEI-YAN**; , Taiwan
Assignee:	**TAIWAN SEMICONDUCTOR MANUFACTURING COMPANY LIMITED**, Taiwan News, Profiles, Stocks and More about this company
Published / Filed:	**May 28, 2001** / March 16, 2000
Application Number:	**TW2000089104802**
IPC Code:	B24B 7/24; B24B 37/04; H01L 21/304;
ECLA Code:	None
Priority Number:	March 16, 2000 **TW2000089104802**
Abstract:	

This invention relates to a end-point detection method of CMP polishing using the principle of optical confocal feedback, wherein the optical feedback method is used to replace the conventional interference method, and can accurately detect the end-point of CMP polishing. The aforementioned method comprises the following steps: (i) fixing the distance between the polishing pad and the lens of the optical confocal feedback system; (ii) if the end-point of polishing is located at the position of the first distance which is the distance from the metal layer in the wafer to the surface of the wafer, making the distance from aforementioned polishing pad to the lens of the optical confocal feedback system to be the length of the focal length of aforementioned lens subtracting the length of the aforementioned first distance; and (iii) proceeding the CMP polishing until the optical confocal feedback system detects the reflection light intensity to be maximum. However, if the distance between polishing pad and the lens of the optical confocal feedback system cannot be fixed, another set of the optical confocal feedback system can be used to determine the distance between the polishing pad and the lens of the optical confocal feedback system, and similar methods can be used to detect the end-point of CMP polishing.

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1 family members shown above

Other Abstract Info: None